



FEMA

Culvert Upgrade: Prevents Flooding, Provides Safety

Sullivan County, NH - You would hardly notice the Quabbinnight Brook as it passes under Sugar River Drive in the City of Claremont, NH on a sunny day. But during heavy rain, stormwater often backed up at an undersized culvert under the road, resulting in massive flooding on the upstream side of Sugar River Drive.

Engineering studies showed that the culvert, a six foot corrugated metal pipe, did not have the capacity to carry a 25-year storm event. The culvert had already failed and the flow of the brook was no longer contained. The flooding caused deterioration of the roadway embankment and would eventually result in embankment failure.

The Claremont Department of Public Works continually patched the roadway above the culvert. Yet, it continued to sink two to three inches after patching, indicating a loss of bedding material around the failed culvert.

Flooding of Sugar River Drive isolated more than 150 households, more than 600 people, the Sullivan County Nursing Home, and the County House of Correction from the city. Emergency personnel, including fire, police, and ambulance services, would face a 25-minute detour through a neighboring town, but only if the alternate road was passable. School busses, heavy construction, and farm equipment also accessed Sugar River Drive.

The solution to the problem was to replace the failed culvert with a concrete box culvert.

The new, larger, box culvert is 12 by 5 by 40 feet with wing walls.

The project was funded by the Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant Program (HMGP), which provides grants to states, Indian tribes, and local governments for long-term hazard mitigation projects following a major disaster declaration. Under this program FEMA pays up to 75 percent of the project cost. Either the state or the applicant covers the remaining 25 percent.

The project was completed in the spring of 2006. The total cost for the Sugar River Drive project was \$150,000. FEMA's share was \$112,500, and the local match was \$37,500.

Claremont officials report no more flooding problems on Sugar River Drive as of February 2009.



**Sullivan County,
New Hampshire**



Quick Facts

Sector:

Public

Cost:

\$150,000.00 (Actual)

Primary Activity/Project:

Flood Control

Primary Funding:

Hazard Mitigation Grant Program (HMGP)